

Household Hazardous Waste Services

Presentation for Kansas Recycling, Composting and Household Hazardous Waste Conference

People and Technology
Creating a Better
Environment

March 29, 2006



Overview

What happens to HHW?

Waste management from trunk to grave

- Segregation
- Disposal Options
- Waste Management Technology



HHW Segregation

- **Sort & package according to your waste management method or disposal destination**
- **Waste consolidation/pour up**
- **Material reuse program**
- **Lab pack and loose pack**
- **Third party direct (i.e. batteries, tires, etc)**



Disposal Options

- Recycling & Reuse
- Treatment
- Fuels Blending
- Incineration
- Landfill
- Explosives Management



Primary Receiving and Final Disposal/Recycling Facilities

- What are the differences?
- Role for each type
- How do you know where your waste ends up?



Primary:
TSDF/Incinerator
Kimball, NE



Secondary:
Mercury Waste Solutions
Union Grove, WI



Technology: Recycling

- Specialized third party facilities
 - Antifreeze
 - Motor oil
 - Oil filters
 - Batteries
 - Mercury
 - Fluorescent lights
 - Electronic waste
 - Cylinders
 - Latex paint



Technology: Treatment

- Aqueous treatment technologies, including chemical oxidation and reduction, neutralization, metal precipitation, flocculation, filtration, carbon adsorption and stabilization through encapsulation.

- Acids
- Bases
- Oxidizers



CHES Wastewater Treatment Facility
Baton Rouge, LA

Technology: Fuels Blending

- High BTU (>5,000 BTU's/pound) liquids, solids and sludges. Blended/processed for fuel value
- Cement Kiln Features
- Cement Kiln Fuels:



- Oil Based Paint
- Paint Related Material
- Many other petroleum based products

Technology: Incineration

- Rotary Kiln
- Fluidized Bed



CHES Incinerator Kimball, NB

- Pesticides
- Spent Solvents, Paint
- Flammable Solids
- Organic Peroxides
- Aerosols
- Environmentally Hazardous Substances

Technology: Landfill

- **Clean Harbors Lone Mountain Facility**
 - **Hazardous Waste Landfill**
 - **Direct Landfill**
 - **Solidification / Stabilization**
 - **PCB Disposal**
- Solids/Liquids/Sludges
 - Latex Paint
 - Alkaline Batteries
 - Asbestos
 - Treated Wood



Lone Mountain Facility; Waynoka, OK

Technology: Explosives Management

Thermal treatment facility

- High hazard & cylinder group
- 300 kinds of explosive & reactive wastes
- SubTitle X Permit

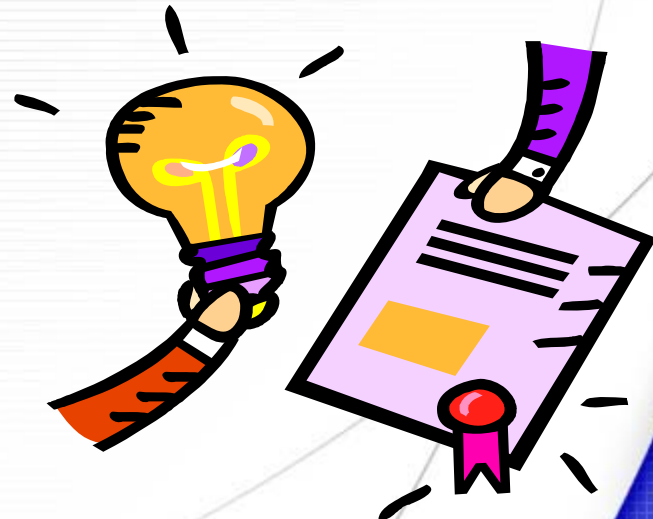


Thermal Burn Units Colfax, LA

- Fireworks
- Munitions
- Nitro-related compounds

Disposal Documentation

- **Importance/Purpose**
- **Manifest**
- **Certificate of Disposal**
- **Certificate of Destruction**





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